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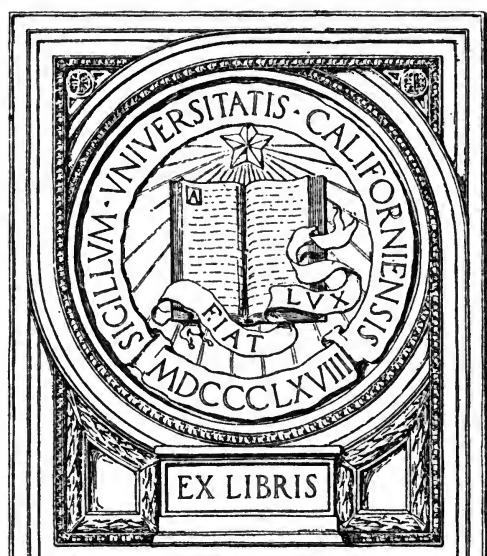
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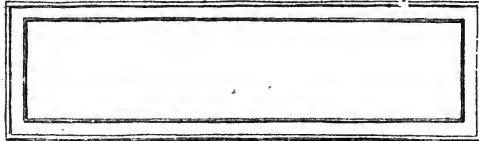
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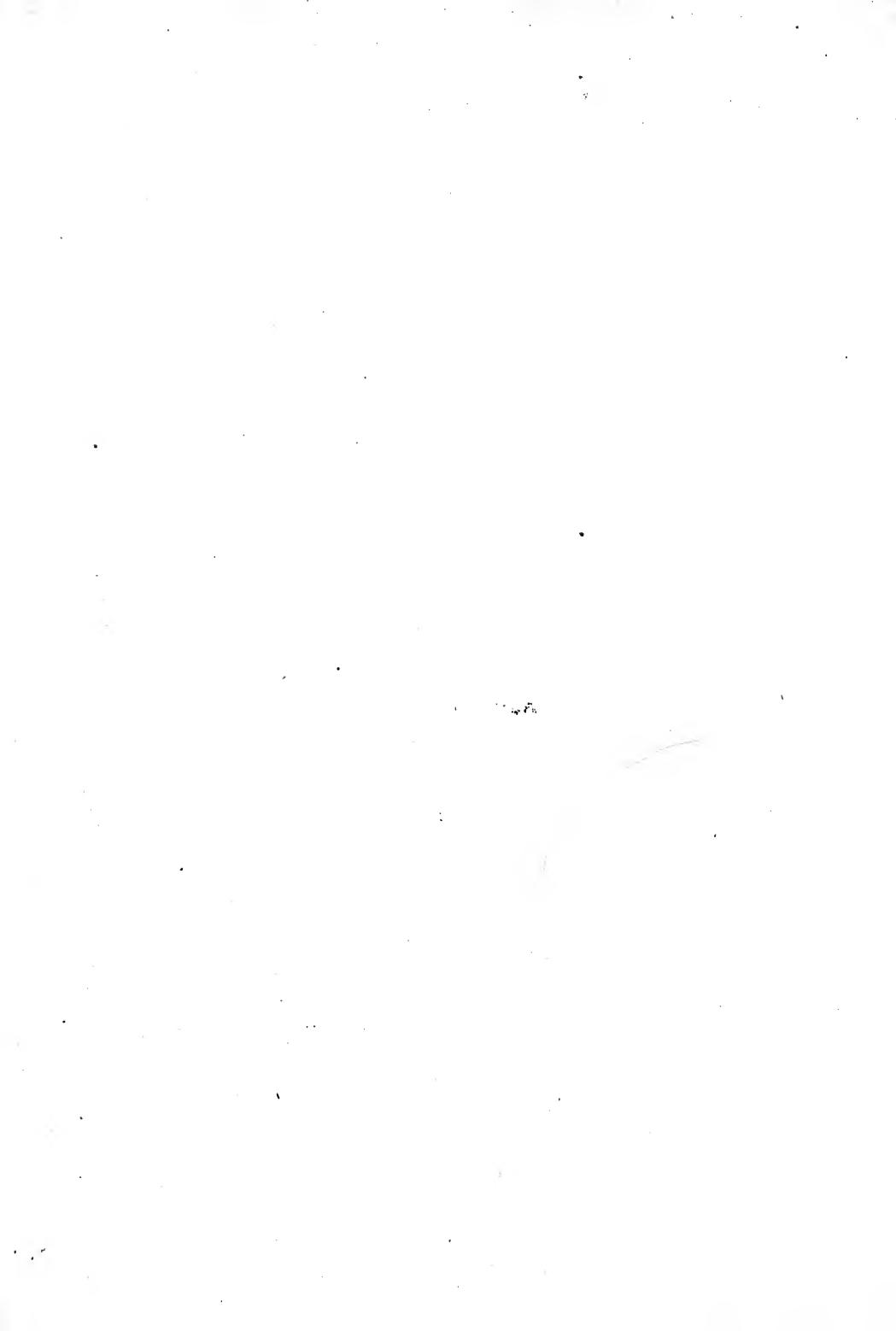
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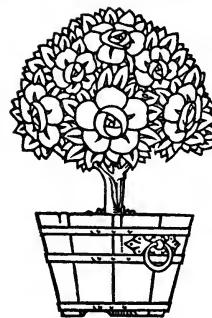


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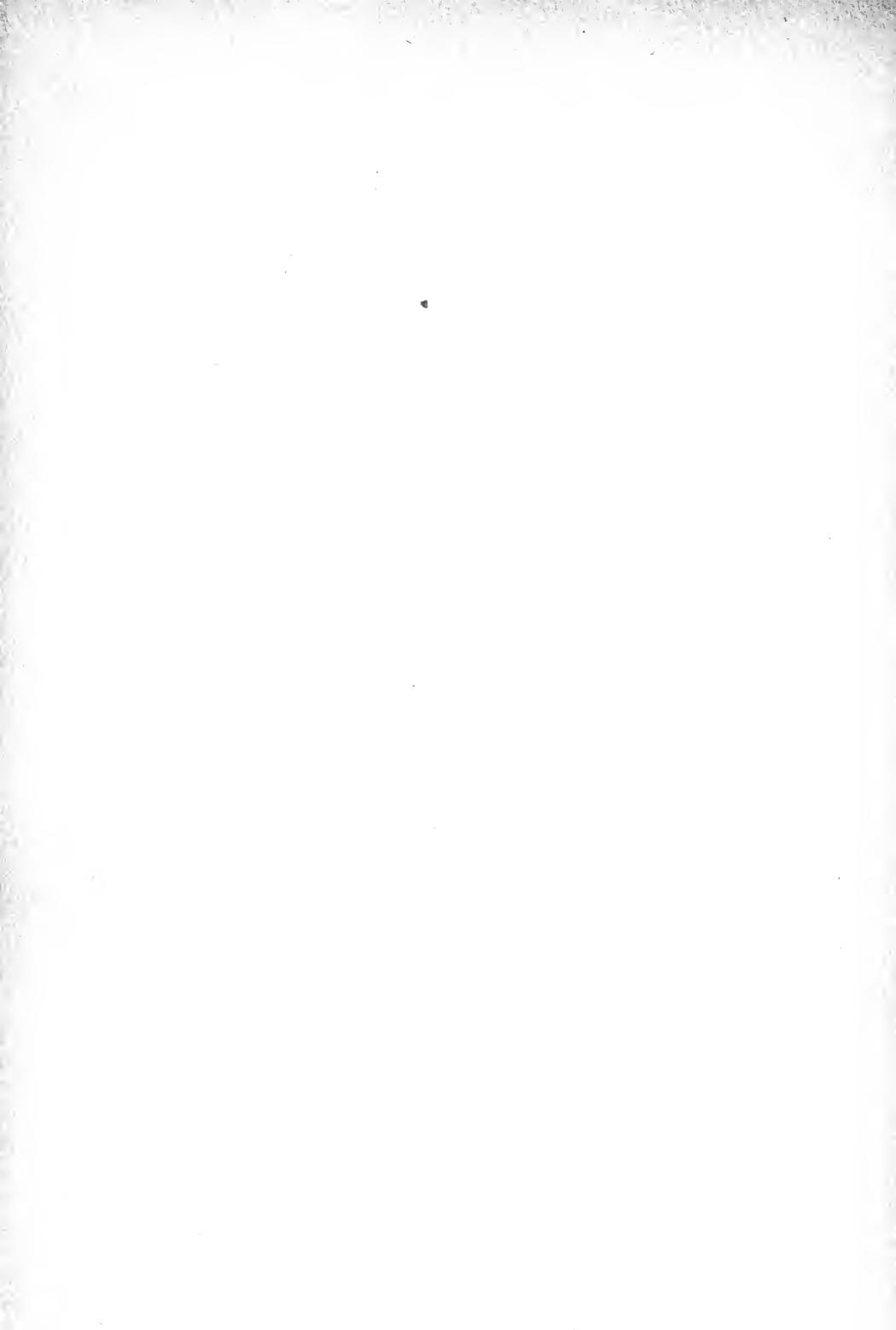


The STEWARSHIP OF THE SOIL



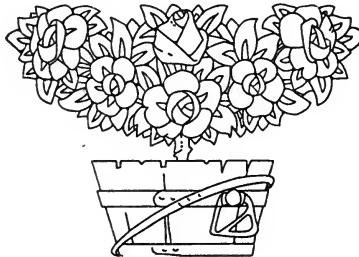
Address by

JOHN HENRY WORST
*President of NORTH DAKOTA
AGRICULTURAL COLLEGE*



The Stewardship of the Soil

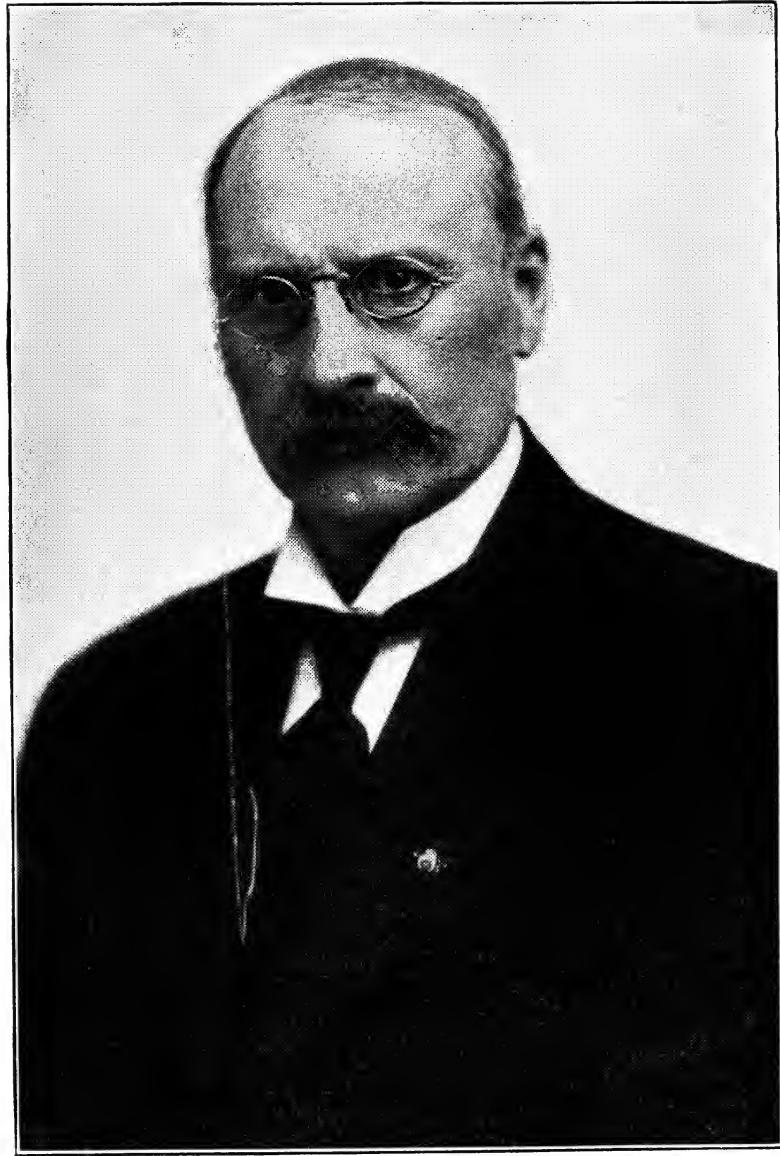
BACCALAUREATE ADDRESS BY
JOHN HENRY WORST
PRESIDENT NORTH DAKOTA
AGRICULTURAL COLLEGE



*Delivered at the Twenty First Annual Commencement of the
North Dakota Agricultural College
Fargo, North Dakota, June Sixth, Nineteen Hundred Fifteen*

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JOHN HENRY WORST

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The Stewardship of the Soil

By J. H. WORST

Our ambitious young commonwealth, in conjunction with other states comprising the great Northwest, occupies a commanding position in the industrial and economic affairs of this nation.

Mines of gold and silver or forests primeval North Dakota does not have; but from the millions of fertile acres comprising our vast agricultural empire, we may reap a golden harvest every year that will exceed in wealth the output of all the golden placers in the western mountains.

The harvest of minerals, however, can be gathered but once. Time will not restore the precious nuggets.

The forests once harvested can, at great expense, be renewed in the course of a century; but our harvest of domestic plants and animals recurs with every passing season to recompense the farmer for his toil and to enrich the farmer's friends.

What a precious theme is harvest! The hopes, the well-being, the life of the world is fast bound up in the magic of this single word.

The soil upon which the harvest depends, moreover, is God's benediction to humanity. Measured by consequences, Heaven has vouchsafed no form of stewardship that is fraught with such tremendous responsibilities as this stewardship of the soil. In the final analysis this stewardship represents the farmer's obligation to society.

And yet sacred as is the soil and binding as is the farmer's obligation to society, the means for providing the world's food is nevertheless at his mercy.

It is a well-known fact that the soil can readily be depleted of its fertility and thus robbed of its strength by a system of exploitation, commonly referred to as "extensive farming." Too much of our land is being thus exploited. On the other hand the productiveness of the soil may be very greatly improved. Denmark, Belgium, Germany, and other European nations have fully demonstrated that by the application of science to the art of agriculture, the productiveness of the soil can be multiplied almost to the limit of necessity.

A Progressive Agriculture. Fortunately Nature has supplied every means for the development of a progressive and permanent agriculture. It is also obvious that it is man's privilege, if not his mission, to improve upon Nature—to substitute quality for mere physical endurance, in agricultural products.

By the grace of Providence the individuals of the animal and vegetable kingdoms were not created inflexible in habit or perfect in form, but they may be changed in character and quality and intrinsic worth at the will of the intelligent and observing farmer. To this end agricultural education lends its beneficent influence. Man's dominion over Nature would be such in name only were it not for the class-room and the laboratory, for research and investigation; for by these means scientific knowledge is obtained and diffused and eventually brought to bear upon the solution of the most vital problems that concern the human family. These problems center largely around food and clothing. To supply these necessities an

industry is created—the business of agriculture—the most important industry in all the world. An industry of such fundamental importance, moreover, should receive from the states and from the federal government financial consideration in proportion to its moral and economic importance as well as to the probabilities that may be entertained for its continued improvement. For abundant as are earth's natural resources, yet without the aid and direction of human intelligence they could not supply the world's ever increasing population with food, clothing and shelter. Complying with known conditions of natural reciprocity, however, the animal and vegetable kingdoms submit to whatever modifications become necessary in order to supply the needs of the human family.

Nature's Forces Operate Blindly. Moved, therefore, partly by necessity and partly by curiosity, the material world has been and is being continually modified by the ingenuity of man. Undirected, however, Nature's forces act blindly; hence, produce mainly such qualities in organic life as endurance, or adaptation to local soil and climatic conditions. In the animal and vegetable kingdoms the universal demand of Nature is to perpetuate their species—"to produce after their own kind." In accordance with this law the humblest plant or animal is compelled to maintain a perpetual warfare against its fellows for means of subsistence.

This competition for nourishment is usually so sharp and continuous that mere existence or endurance rather than excellence or quality, seems to be the end and aim of natural law. Hence, the strong survive and the weak perish.

Beginnings of Agriculture. Here agriculture begins. By relieving plants of this intense compe-

tition by means of tillage, and by selecting the most promising for domestication, they are enabled to use all their energy for the development of those qualities which add to their intrinsic value, instead of expending it in the struggle for existence. Given, thus, free access to the soil and sunshine, with needful nourishment supplied and their fungous or parasitical enemies destroyed, the domesticated plants yield trustful obedience to the protecting hand of the husbandman. Freed altogether from the necessity of self-protection they become prolific and pour into the world's bread basket in marvelous abundance the seeds—a single one of which would suffice to answer Nature's law for the propagation of species. This surplus of yield for which each plant has need of but a single seed, and more especially this improvement of quality for which the plant has no concern, is Nature's reciprocal reward for having given her children gratuitously that protection which otherwise they would have had to provide for themselves.

Nor is animal life less susceptible of improvement. Between the animal wild and the animal domesticated—that is whether Nature-bred or man-bred—the range in quality is as marked as that which separates the savage from the philosopher.

Nature demands only strength, endurance; but man demands quality and excellence, and he proceeds scientifically to accomplish his purpose. By conscious design and a sort of mental architecture the animal to be is planned, and the picture thus conceived in the brain of the breeder becomes incarnated in the form, size and character of the animal. Not only is the animal created with the desired quality as to its parts and products, but its

nature is transformed from fear and ferocity to that of trust and docility.

For example the descendants of the wild horse are not only changed from vicious brutes to trustful beasts of burden, but are also differentiated into many different breeds to meet the demands of strength, speed or endurance. Specimens of such breeds as the Belgian, Percheron or Hambletonian exist as monuments to the breeder's art no less renowned and for more useful purpose than anything in Nature, the likeness of which the sculptor has wrought in marble or the artist has transferred from life to canvass.

From the wild buffalo, presumably, the ideal strains of pedigree kine, for beef or dairy products, have been created as surely and even more scientifically than the sculptor has immortalized his ideals in granite or marble.

Thus animal life is to the skillful breeder as clay in the hands of the potter, and though a supersensitive and artificial generation may look upon this form of genius as vulgar, it nevertheless is God's work and the doers thereof are working with God. For without this incarnation of quality into plant and animal life the world's population could not supply its fundamental wants nor could civilization rise above the animal instincts in man.

The farmer, therefore, is a most important personage, and his vocation the most absolutely needful in all the world. The farmer is in very truth a creator, certainly a co-creator, improving Nature by the aid of science, just as the human mind and character are improved by means of education. And when the prejudice of the ages has been rolled away the name "farmer" will rank among the most envied names that enrich our

mother tongue. Here, indeed, may be verified the saying: "The first shall be last and the last shall be first."

While we honor the sculptor, the painter or the poet whose genius partakes of the immortal, and yet satisfies no hungry mouth, some degree of honor might well be given to this other sort of genius which has multiplied human food beyond computation and has otherwise so largely mitigated the burdens of life.

Vocational Education. From the foregoing it is little wonder that the education of the masses is surely and rapidly gravitating from the classical to the utilitarian, from the formal to the vocational. The world's work must be done, and as those whose stewardship is the soil are compelled to render a combined physical and mental service in order to discharge their social obligations, they are entitled to education in harmony with the tasks awaiting them, to the end that they may work intelligently, hence joyfully.

Agriculture and engineering, therefore, are fundamental vocations when considered either from the view-point of necessity or the country's prosperity. By many, however, the spiritual well-being of a people is considered paramount, and in a sense it is, but a cheerful soul seldom inhabits a naked or hungry body.

As food, clothing and shelter are absolute necessities, no degree of culture or religious enthusiasm can render them less needful. Heaven's choicest physical gift, the soil, provides the means for acquiring these indispensable necessities, and the vocation that accepts the responsibility of its stewardship ministers to the physical, as educators minister to the mental, or the clergy to the spiritual needs of man. Moreover,

in the order of Nature the physical takes precedence, being primary and basic, and until legitimate physical wants are supplied neither mental nor spiritual food can be satisfactorily assimilated.

A commonwealth, therefore, that educates her children in due proportion to and in harmony with the demands of her principal industry, acts the part of wisdom. In this the state becomes the servant of both present and future generations by training her children for the conservation of Nature's gifts, while yet multiplying their use for the comfort and happiness of all the people. If the clergy would preach occasionally from the book of Nature, they would discover a proximity to and dependence upon God enjoyed by him who sows and reaps, who cultivates animals and flowers, who creates things and works miracles as his ordinary life work, which few others can enjoy. Such themes might not only be expounded with profit to those who work their fellowmen, but should also be impressed betimes upon those who work the soil for the good of their fellowmen.

The Paramount Problem. The paramount problem, therefore, is to make the conditions of rural life desirable—to convert farming into an enjoyable vocation; to make farm life and its labors a business to be envied and not despised. The fact is, planning for beauty and comfort in the city has progressed far and away beyond the country. It now but remains for the country to catch up and go the city many times better. This is entirely possible, since the great "out doors" is a country heritage and ample spaces are available for exterior delights such as trees, shrubbery and flowers, and for free access to abundance of pure air and sunshine.

Moreover, we should not forget that we are now living in a new world. The old agriculture and its associated rural industries have been shaken to their very foundation. This makes the solution of the rural problem, to some extent, speculative.

For one thing the country is becoming urbanized. This may prove helpful. Again it may not. Individualism, however, is giving place more and more to commercialized enterprise. At the same time the evils of transient tenantry follow close upon the heels of successful farming, where farmers rent their land and move to town; and also of unsuccessful farming, where the mortgage shark eventually becomes possessed of the land. What the state needs to encourage, therefore, is farm ownership by the many rather than by the few, and farm ownership rather than farm tenantry. We must retain on the farm, as farmers, the best type of American manhood and womanhood or the nation will fall into decay, just as Rome fell with the decline of her agrarian influence.

The consolidated country school, by rendering obsolete the one room district school house, is a progressive step toward improved educational facilities for rural children.

The country church, on the other hand, has become more decadent than aggressive. This among other rural agencies is not organized in proportion to its importance. Some progress, however, is being made by means of social organizations, but the ultimate solution of the rural problem depends more largely upon education than upon any other single factor.

Rural Social Leaders. Rural social leaders in full sympathy with the country life movement will find here a fruitful field for earnest endeavor. To

no class should the state look for such leadership, and with so much assurance, as to the alumni of its Agricultural College. Educated at public expense and in an institution of higher learning that stands specifically for all-round rural improvement and rural patriotism, the students that go out from this college cannot misinterpret their duties nor fail to understand the responsibilities they assume as graduates of the North Dakota Agricultural College. Nor is their field of labor an unenviable one. It may at times seem irksome, even discouraging, but nevertheless it is the most exalted and dignified calling to which men and women of special training and culture can aspire.

To rescue the soil from the indifference and greed and selfishness wherein this generation unwittingly robs succeeding generations of their rightful inheritance, and to rescue the very vocation of agriculture from mercenary interests is a mission worthy of the best leadership and patriotism of our day. But it must not stop even at this. The public welfare demands that nearly half the population of the entire country, and certainly four-fifths of the population of this state, shall permanently pursue agriculture for a livelihood. This vocation, therefore, must be made so desirable and satisfying that that number will joyfully accept it as a matter of free choice. It must be so developed that it will afford an unsurpassed market for energy and brains, and so independent of parasitical interests that when two bushels of wheat are grown where one now grows the producer will receive the benefit.

Increased Production Not Sufficient. Hitherto the agencies for rural improvement, both state and federal, have directed their energies chiefly toward increased production. And this with but

scant consideration for profits that should be realized by the producer as a result of the larger yields. Material prosperity, however, is not a sufficient motive, except where it assuredly is used to improve the moral and social conditions of the community life. To double the yield of crops without doubling the enjoyments of living and improving home comforts accordingly, will avail but little toward developing rural conditions that will withstand the competition and false allurements of the city.

Urban Degeneracy. A nation's strength, moreover, is a matter of blood and brain fiber. Urban degeneracy is an accepted biological fact. The dissipation, lack of physical exercise in the open air, and high pressure living and working leaves in its trail a progeny diminishing in numbers and decadent in those high qualities essential to good government.

Democracy, as a permanent institution, however, is not yet an assured fact. The experiment of self-government is still in the making. Its perpetuity cannot be predicated upon scheming traders, money brokers and political manipulators, but must depend in the last analysis upon the solid phlegm and conservatism of its rural districts where men are too busy with productive labor to scheme for political office or unearned wealth. In other words, and I speak it with sincerity, the rural population conserves the real dependable life blood of this nation. It is an accepted fact that in every crisis of our country's history the rural population was not only on the side of right, but ready to defend the nation's honor with their votes or with their blood.

When the nation's debt was appalling and money poured into the national treasury in but

feeble currents, the tariffs that replenished it again were borne like a young Hercules by the farming class, though they received but a minimum of its protection. Every influence, therefore, that tends to exalt agriculture as a profession, and farming as a desirable mode of life, whether it be intellectual, political, ethical or spiritual, is for the general welfare.

The time is not far distant, let us hope and pray, when agriculture will cast off the thralldom of the ages and assert her own. But not until the sons and daughters of the country, trained for rural social and industrial service, as you are being trained, assert an aggressive leadership, with genuine patriotism for the needs of the open country, will the domination of ulterior interests be removed and agriculture made free to manage its educational institutions and business affairs, in part at least, for its own good.

The Rural School Problem. Since education is the governing factor, especially so far as it directs the attitude of rural children toward rural conditions, the country school should be so redirected and revitalized as to "stir into action community forces which are now dormant; and to make the rural school a strong and efficient social center, working for the upbuilding of all the varied interests of a healthy rural life."

"The redirection of rural education means that the school is to abandon its city ideals and standards, except as these are adaptable to rural as well as to city schools, and to develop its instruction with reference to its environment and the local interests and needs. The main efforts of its instruction should be to put its pupils into sympathetic touch with the rural life about them, in which the great majority of them ought to find their future homes."—*Cubberley*.

The away-from-the-farm-influence of rural education which has in the past proved a serious handicap to rural progress and open country pursuits, would thus be materially counteracted.

Quoting Cubberley again:

"The uniform text-books which have been introduced by law, were books written primarily for the city child; the graded course of study was a city course of study; the ideals of the school become, in large part, city and professional in type; and the city-educated and city-trained teachers have talked of the city, over-emphasized the affairs of the city, and sighed to get back to the city to teach. The subjects of instruction have been formal and traditional, and the course of instruction has been designed more to prepare for entrance to a city or town high school than for life in the open country. So far as the school has been vocational in spirit, it has been the city vocations and professions for which it has tended to prepare its pupils, and not the vocations of the farm and the home."

Then says Roosevelt:

"Our school system is gravely defective in so far as it puts a premium upon mere literary training and tends, therefore, to train the boy away from the farm and workshop. Nothing is more needed than the best type of an industrial school, the school for mechanical industries in the cities and for teaching agriculture in the country. No growth of cities, no growth of wealth can make up for any loss in either the number or the character of the farming population. We of the United States should realize this above most other people. We began our existence as a nation of farmers, and in every crisis of the past a peculiar dependence has had to be placed upon the farming population, and this dependence has hitherto been justified."

The Rural Church Problem. No permanent rural civilization, however, can be maintained that will attach the population to the soil with satisfaction and contentment without provision being made for enjoying religious services among

people of their own kind and class. This necessitates a social and religious center for every rural community. The church can and should be made such social center. For economic and social reasons, however, denominationalism can well be dispensed with, as such, and just plain Christianity substituted for sectarianism. A social center thus maintained will stimulate neighborly intercourse and satisfy the demands of both young and old for religious culture, for recreation and pastime. Where schools are consolidated the school house and grounds will answer for all gatherings whether for worship, for the discussion of civic or neighborhood problems or for recreation and amusement. For without such neighborhood intercourse, life deteriorates into a dull routine, and the moral and religious tone of a community, degenerates. Moreover, under such conditions, young people become disgusted with its monotony and aimlessness, and seek city employment.

But before the country church can be made an efficient community force, pastors must be found or created that meet the conditions of country life. A most excellent city pastor might prove to be a regrettable misfit in a rural community. Moreover, the modern clergy seem quite as prone to herd in the towns and cities as the rest of mankind, which fact has a bad influence on the youth of the country.

Quoting from *Rural Life and Education*: "The rural minister needs economic and agricultural knowledge more than theological, that he may use the economic and agricultural experiences of his people as a basis for the building-up of their ethical life; he needs educational knowledge, that he may direct his efforts with the young along good pedagogical lines; and the church as an in-

stitution needs to study carefully the rural-life problem, and to plan a program of useful service along good educational and sociological lines. Unless this is done, the church will bear but little relationship to a living community; its influence on the young will be small; and its mission of moral and religious leadership will be forgotten by the people."

Other Agencies for Rural Improvement. In addition to providing country schools and employing rural school teachers as efficient as the best in the towns, and the country church reawakened and converted into an efficient institution for progress, the Grange, farmers' clubs, the Y. M. and Y. W. C. A., the rural library, boys and girls' clubs, farmers' institutes, woman's clubs, literary and debating societies and amateur theatricals, of which the Little Country Theatre is the best exponent, can with profit be incorporated into the life of every rural community that maintains a social center, and that takes genuine pride in making country life what the possibilities so readily warrant.

No one of these separate organizations, even though fully developed and earnestly supported, will altogether satisfy the needs of a community. No one of them should be over-emphasized for its own sake alone, for each is but a part of the community need. All are needed. The friends of each, therefore, should work for all and all work for each, and becoming thus federated, they will prove to be a positive force and establish, beyond question, a community spirit satisfactory to old and young alike.

A sufficient number of these rural social institutions to meet the changed conditions of modern life is as essential as a progressive and highly

contented agriculture; for without such institutions agriculture will decline until on a level with the peasantry of other and less favored countries. For just in proportion as agriculture advances or declines will the prosperity of the people rise or fall, and the integrity of our government be stable or questionable. This fact has been clearly demonstrated in the history of nations; hence, stewardship of the soil embraces not only conservation of its fertility, but the fostering of such social institutions and educational forces as may be necessary to support a rural civilization that will minister to all the physical, mental and spiritual wants of a highly intellectual and permanent population. Said James A. Garfield:

[Redacted]

“The higher education of the village and city youth, together with a modicum of the country youth, with only the fifth to eighth grade for the best blood of the state may stand for the educator’s ideals, but it is bad for the country as a whole. It tends to make aristocrats of the poorest and slaves of the best blood. Education is for all, not for a favored few.”

The Morrill Act. The Morrill Act of 1862 was the first important step toward the emancipation of agriculture. The establishment of the Land Grant Colleges was the biggest piece of constructive legislation that Congress has enacted during the past century. By means of higher education thus redirected and vitalized, industrial independence will ultimately be realized. But the work moves slowly. However, in spite of ridicule and unmerited handicaps, and even the contempt of too many of the farming class, these institutions have grown steadily in influence and power.

The North Dakota Agricultural College directs its energies toward a system of education that at once affords all the means of culture and character

building that collegiate courses of study can offer, yet without departing materially from giving special emphasis to those subjects which are directly related to the homes and the chief industry of the state.

The purpose is not only to increase production as a means of profit and to render helpful social service, but to make farm life and rural conditions so agreeable and satisfying that the choice of agricultural pursuits, on the part of educated young people, will prove as popular and inviting as that of any other industry or profession. This is not an impossibility. From an educational viewpoint no vocation exceeds agriculture in the material available for calling out the best there is in man, spiritually or intellectually. From a social viewpoint, the country represents the purest and most neighborly sympathies. And from an industrial viewpoint it is the state's support and should be the state's pride. North Dakota will expand in wealth and influence, therefore, in proportion as she throws wide open the door of agricultural opportunity for the young people of the state. This she can best accomplish by means of public education expressed in terms of rural life.

After twenty years of service as President of your Agricultural College, I find that my chief gratification comes from having associated daily with a loyal and dependable faculty and with so many clean, ambitious and sympathetic young men and women.

In you and the thousands of Agricultural College students scattered over this and adjoining states, many of them having already won enviable distinction by their public services, and all giving evidence of most exemplary citizenship, I not only take sincere pride but also find my chief reward. Others may scheme for wealth or fame, but for

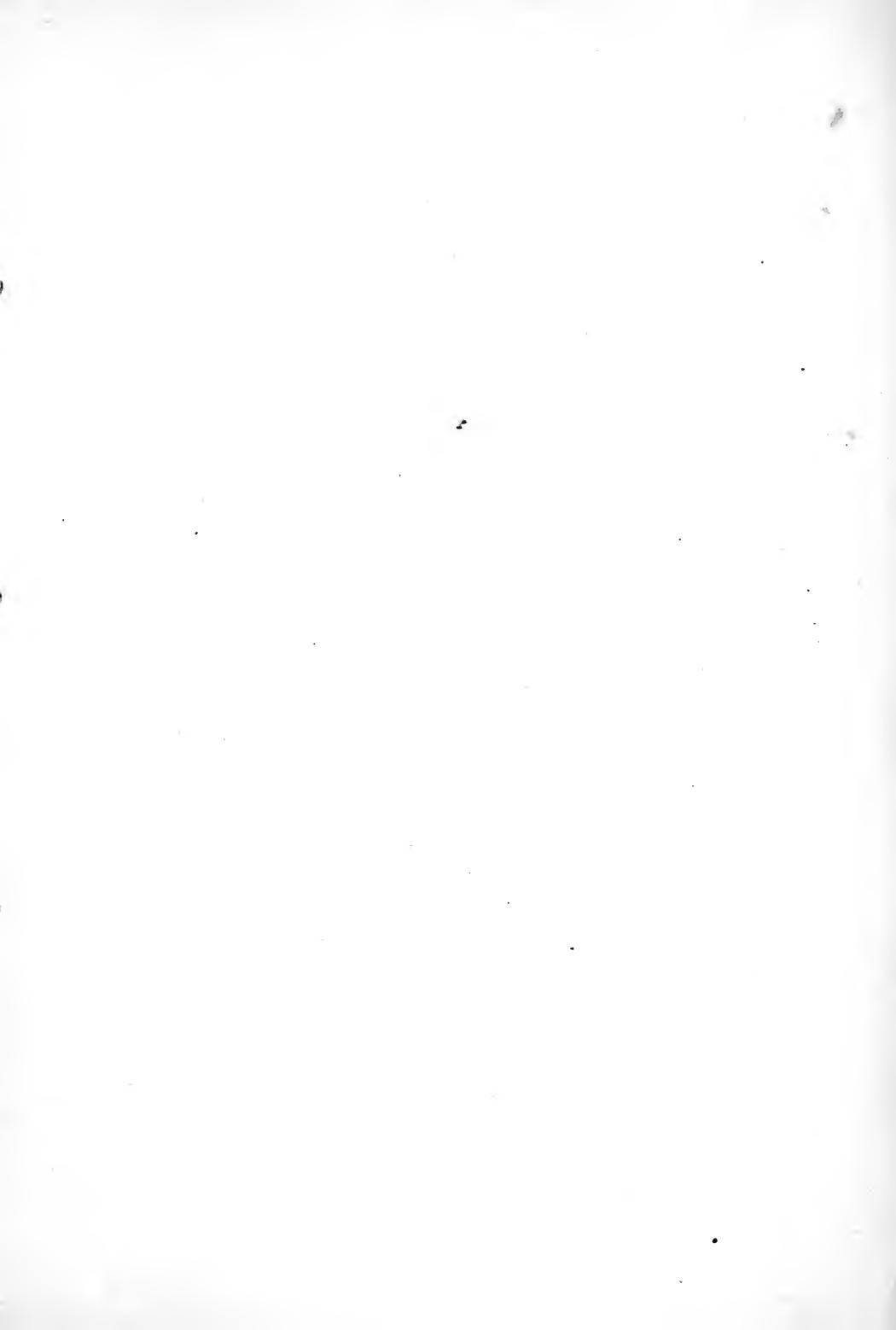
one at my time in life, I would not exchange the friendship of the Agricultural College student body, past and present, for earthly riches or personal honor.

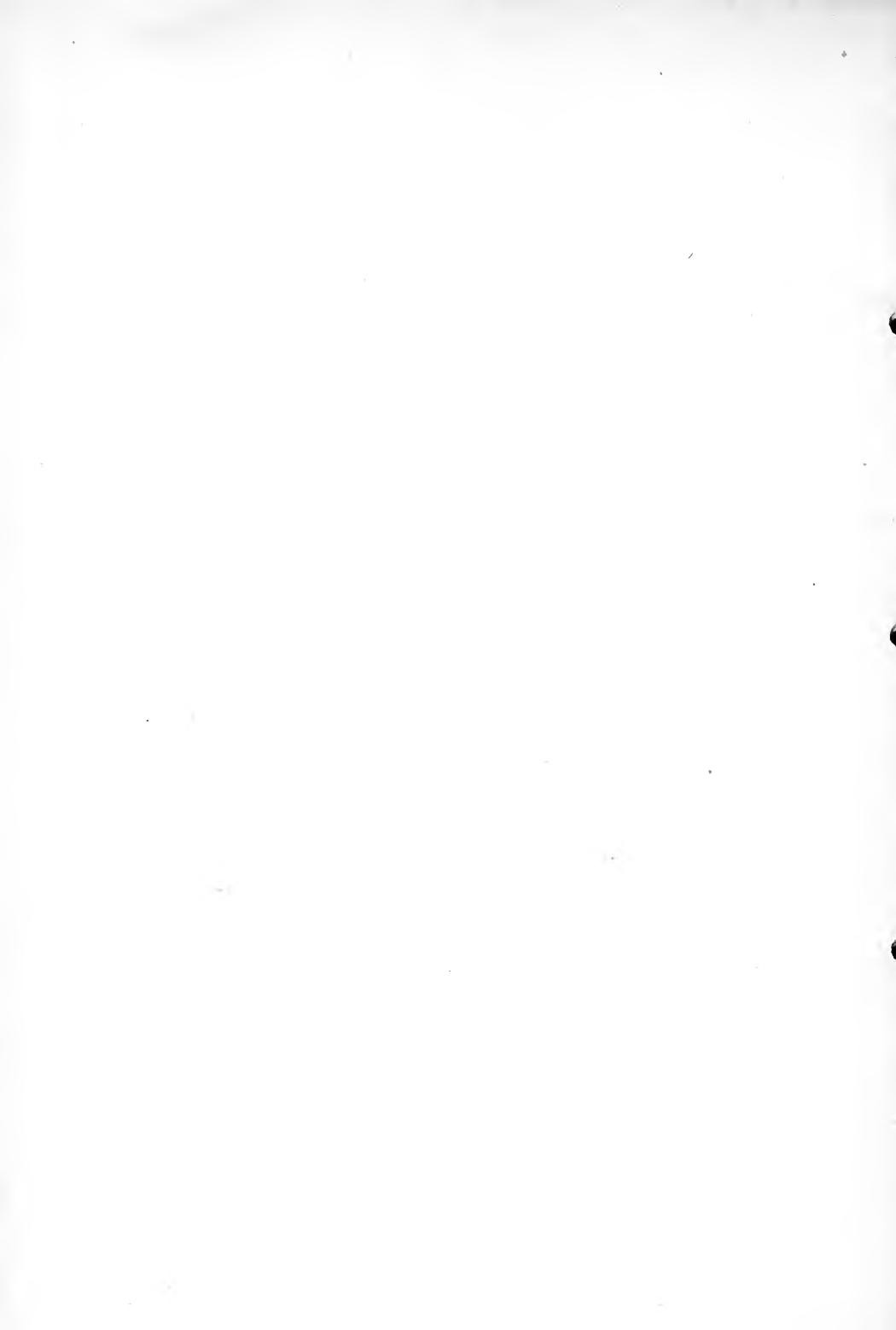
I have implicit faith in the future of our Agricultural College as I have in this great agricultural state. Her broad acres are being rapidly occupied by a progressive and enterprising husbandry. Her cities and villages keep pace with her rural development. The dreams of the pioneers are fast becoming realities. The erstwhile home of the red man and the feeding ground of the bison, are destined soon to be thickly dotted over with luxurious farmsteads, made beautiful by the arts of civilization and prosperous by the skill and industry of a happy and contented rural population.

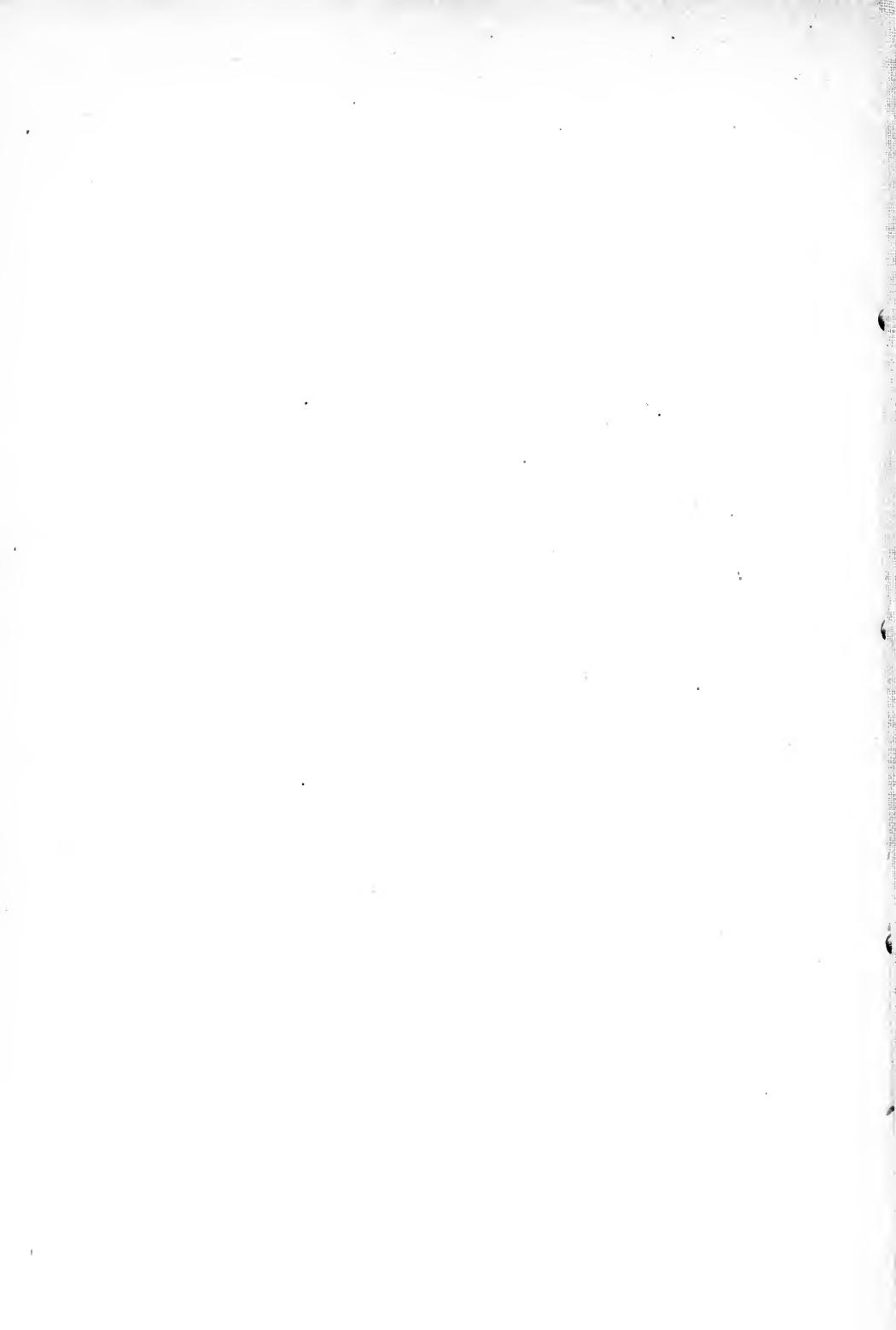
Students of the Agricultural College, your mission lies in this direction. Your influence upon the future development of this state will be as certain as it will be beneficent. The door of opportunity stands ajar, inviting you to enter and share the blessings that reward the industrious and reap the honors that crown the lives of those whose stewardship has been faithfully kept. May no temptation ever swerve you from loyalty to the cause which your alma mater represents. Too often the enemies of industrial freedom capture with the blandishments of vanity, the trusted leaders of reform.

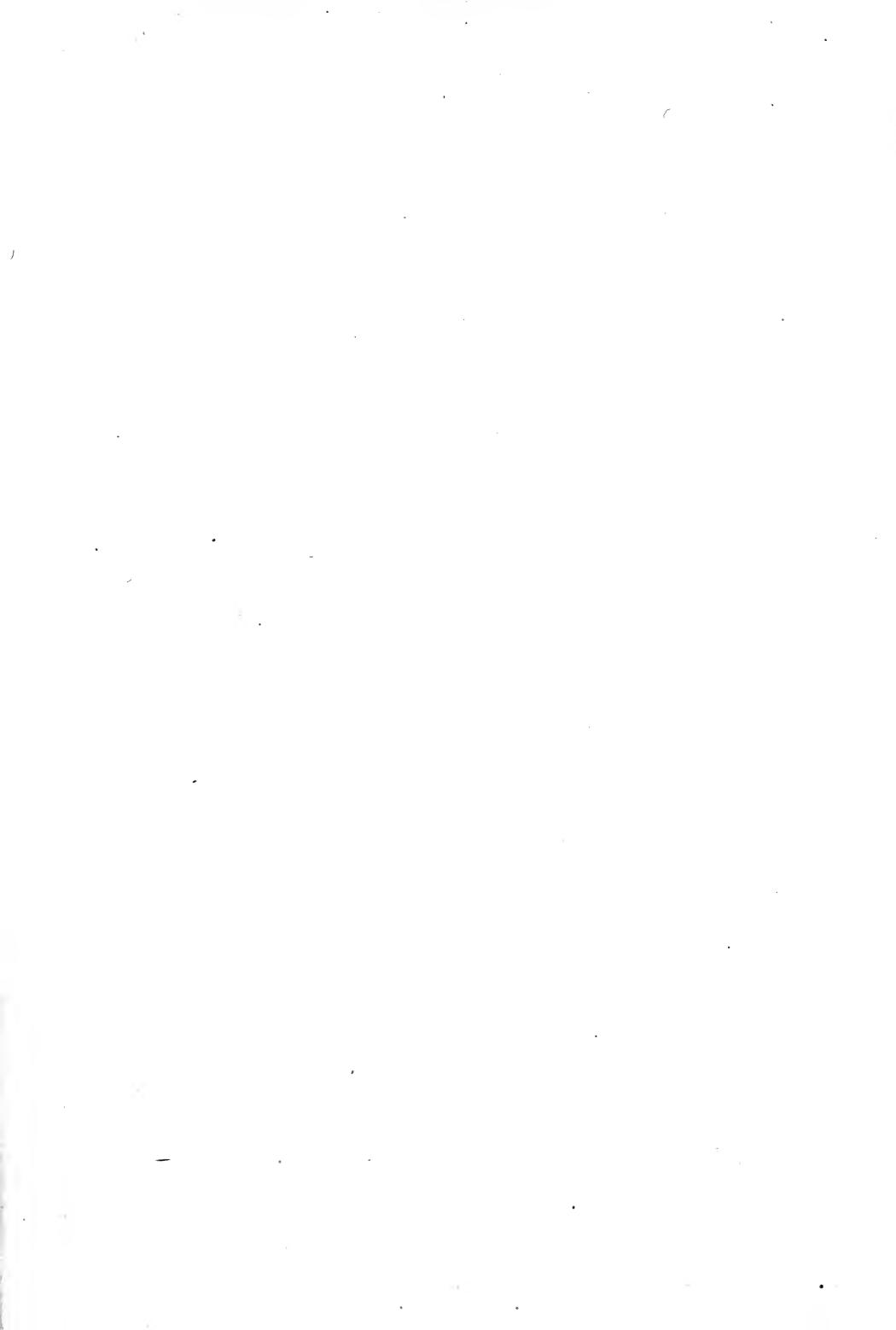
Let your hearts, therefore, ever beat true for the best there may be in store for those whose sweat fertilizes the business of the state. The cause of the people should ever be your cause, and having received your education largely at their expense, spare not a generous service in return for the academic honors that now await you.

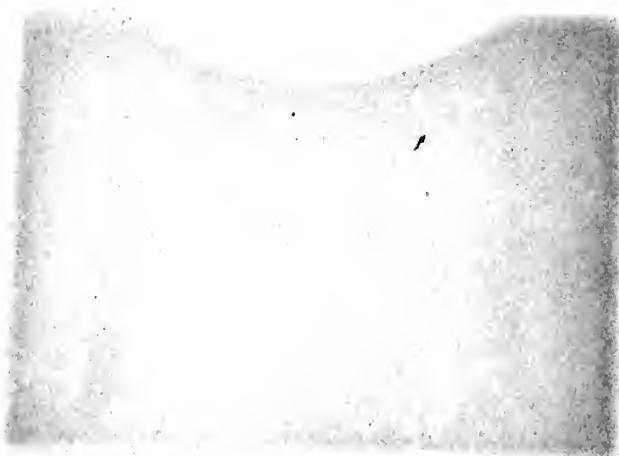












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